

# Pinnipeds in the Columbia

- ODFW has been capturing and marking sea lions at Astoria since 1997,
- Hot brand, “C” for Columbia and 5” tall numbers,
- Radio tagged some.
- Trying to learn about foraging behavior, abundance, activities and patterns of movement,
- Haven’t figured out much yet.

# Pinnipeds at Willamette Falls

- First observed sea lions in 1997,
- Small proportion of salmon taken ( $<1/2\%$ )
- In low steelhead years, 4 - 5%,
- Easy to observe fish taken, must bring to surface to eat.
- In 2002, sea lions began moving to Bonneville,
- Animals seen at WF now seen at BON,

# Pinniped Deterrents Below Bonneville Dam

- About 50 animals consistently observed, recognized by hot brands,
- Section 109 of MMPA allows non-lethal hazing of nuisance animals,
- WA / OR / NMFS started hazing in 2005,
- Explosive charges and Acoustic Devices,
- Effective deterrents on naïve animals,
- Less effective the less naïve animals become.

# 2006 State / Federal Hazing

- WA / OR / NMFS joint program,
- Started April 2<sup>nd</sup>, continues through May,
- BRZ to 11 miles downstream,
- Zigzag back and forth across river,
- Set off cracker shells and seal bombs,
- Continuously repeated during daylight hours,
- 4 days on / 4 days off,
- Coordinated with Corps hazing at dam.

# More Drastic Measures

- Section 120 added to MMPA to deal with Ballard Locks problems,
- Allows lethal take under carefully controlled circumstances,
- Complicated, bureaucratic process, takes years,
- Only applies to listed salmon species, not to sturgeon.

# Section 120 Exception

- Requires individual animals to be identifiable (hot brands),
- Must show significant negative impact on listed species,
- Request submitted to Sec. of Commerce,
- Task Force established, broad representation,
- TF determines measures, not necessarily lethal removal,
- WA / OR working on letter of request, expect to submit late-summer 2006.